SAMPLING AND ANALYSIS PLAN
FOR
LEAD-BASED PAINT INVESTIGATION
DALLAS HOUSING AUTHORITY'S
WEST DALLAS DEVELOPMENT

JUNE 1994

153503.03DOC:SAP0629

Introduction

The Dallas Housing Authority's West Dallas Development (DHA) is a 3,500-unit public housing development located in southwest Dallas, Texas. The DHA property is currently part of the RSR Corporation site which is proposed for addition to the National Priorities List (i.e., Superfund). The DHA property is designated as an operable unit (OU 2) of the RSR Corporation site. Since the DHA property is part of the Superfund cleanup program, all work conducted at the property is overseen by the U.S. Environmental Protection Agency (EPA). All work must, therefore, comply with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requirements and the Administrative Order on Consent (AOC) between the EPA and DHA.

This sampling and analysis plan (SAP) details the sampling activities, quality assurance, health and safety, and analytical procedures to be implemented during the project. The scope of work consists of sampling of paint from surfaces in the interiors of building units on the DHA site and analysis for total lead content to determine the presence/absence of lead-based paint (LBP).

Sampling will be performed by RMT/Jones and Neuse, Inc. (RMT/JN) in building units located in George Loving Place. ENTACT will provide documentation of the field sampling activites. The sampling protocol utilized in this investigation follow the guidelines outlined by the Department of Housing and Urban Development (HUD) in the "***Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing***" (1990). Based on the HUD guideline, LBP is defined as paint having a lead content of 0.5 percent by weight (5,000 mg/kg).

Sampling Locations

Paint samples will be collected from surfaces of the interior of building units in George Loving Place. A total of 65 building units have been selected for sampling. The proposed building locations are detailed in Figure 1 and Table 1. Building units locations include those requested

by Hopkins and Sutter, Waltman and Associates, and units randomly selected by the DHA, Hopkins and Sutter, and Waltman and Associates. The total number of buildings (65) exceeds the number of units (63) recommended by HUD for a LBP assessment by a public housing authority with approximately 1,100 building units (HUD, 1990).

A maximum of eight locations will be sampled in each building unit. These locations include:

- window sills;
- entry doors;
- baseboards;
- cabinets;
- interior doors;
- bedroom walls;
- walls of commonly used rooms (i.e., kitchen, bathroom, and living room); and
- stairways.

Cabinets in some building units may not be sampled due to damage or removal during the asbestos abatement. Baseboards are plastic in some units and will not be sampled in this case. Upstairs rooms of buildings 351, 370, 396, and 433 (building units 3330, 3322, 3685, 3679, 3422, and 3126) are unaccessible due to damage from fire, vandalism, and/or inclement weather. Damage is primarily to the second floor. Entry into the second floor of these buildings poses a health and safety risk to workers and will, therefore, be limited to the first floor of these units.

Sampling Protocol

Paint samples will be collected from building units in accordance with HUD guidelines. The composite samples (maximum of eight within each building unit) will consist of several grab samples. Sample points will be cleaned to remove visible dust from the painted surface. Paint samples will be collected with a new razor blade or other deemed appropriate equipment at each sampling point. In some cases, non-disposable equipment (e.g., wood planar for doors) may

be used to sample the paint. This equipment will require decontamination with a tap water/alconox wash followed by tap water rinse, and deionized/distilled water rinse. Every effort will be made during the sampling to avoid the inclusion of substrate such as wood from window sills or sheet rock from walls in the bulk sample. Paint chips will be placed into eight-ounce glass jars supplied by the laboratory.

Step by step procedures for the paint sampling are included below:

1) Locate building unit on map (Figure 1) and check address with Table 1.

2) Inspect building unit for access and identify as many of the eight potential sampling points as possible.

3) Photograph building unit interior and each sample location. Utilize chalkboard or other suitable marking system to identify each building unit and sampling point in the photograph.

4) Put on disposable gloves.

5) Inspect condition of paint at selected sampling points. Wipe sample location with non-aloe baby wipe.

6) Scrape paint off of building surface with new blade at each sampling point. Put samples into eight-ounce glass jar (at least 20 percent full).

7) Label jar and put on bar code label.

8) Input bar codes in bar code reader for chain-of-custody.

9) Decontaminate all non-disposable sampling equipment.

10) Remove gloves.

11) Complete field notes and fill out project and sample logs in Appendix A.

12) Samples will be shipped or picked up by Core Laboratories for total lead analysis. Split samples will be shipped or picked up by Inchcape Testing Services for analysis. Air samples from filter cassettes will be sent to TRI Laboratories.

13) Samples can be shipped in cooler or other suitable container. No preservation of regular samples is required. Trip and field blank samples will be acidified to below a pH of 2 with nitric acid.

Samples collected during the investigation will be given specific identifier codes. The codes will be as follows:

- First set of characters will represent the project identification code (LBP);
- The second set of characters (numbers) will identify the building unit (e.g., 3117); and
- The third set of characters (letters) will identify the sample point (e.g., CW);

For example, the sample identification numbers, LBP-3117-CW, represents a composite sample collected from the walls of common rooms of building unit No. 3117 during the lead-based paint investigation.

Identifier codes for the various sampling points within each building unit as follows:

- Window sills (WS)
- Entry doors (ED)
- Baseboards (BB)
- Walls of common areas (CW)
- Cabinets (CB)
- Interior doors (ID)
- Bedroom walls (BW)
- Stairways (SW)

Field Documentation

The documentation of sampling and analysis activities conducted at the DHA site will consist of still photography and field log book notes. Photographs will be taken of each building unit and at each sampling point within each building unit. A chalkboard or other suitable marking system will be utilized for each photograph to identify the location (building unit No.) and sampling point.

Notes will be entered into the field log book by ENTACT and will be kept in the possession of ENTACT at all times. The log book notes will include details of sampling, sample identification codes, field conditions, and samplers. Each page must be numbered, dated, and signed by the person making the entry.

Quality Assurance/Quality Control

Quality Assurance/Quality Control (QA/QC) procedures will be implemented as part of the SAP to ensure the precision, accuracy, representativeness, completeness, and comparability of the data generated. The QA/QC procedures implemented for this project will include: 1) duplicate samples; 2) split samples; 3) trip blanks; 4) field blanks; 5) field log book documentation; and 6) chain-of-custody procedures.

Duplicate samples will be collected at a frequency of 10 percent (every tenth sample). Duplicate samples will be analyzed by Core Laboratories (Carrollton, Texas). Split samples will be collected at a frequency of 10 percent and will be sent to Inchcape Testing Services Laboratory in Richardson, Texas. Trip blanks will consist of laboratory pure water put into eight-ounce sampling jars at the laboratory. These samples will be shipped along with the samples. One trip blank will be utilized for each day of sampling. Field blanks will be prepared each day by RMT/JN. Field blanks will consist of laboratory pure water poured into eight-ounce sampling jars in the "field".

The field log book will be kept by ENTACT. Details of the sampling, sample identification, field conditions, and samplers will be included in the log book. Each page must be numbered, dated, and signed by the recorder.

The chain-of-custody for samples will be directly inputted into a bar code reader. The bar codes will be placed on the sample jars and in the sample log book. Chain-of-custody will be completed at the end of each day and prior to shipment of samples.

Health and Safety

The Health and Safety Plan (H&S Plan) for field activities conducted at the DHA site (OU 2) were reviewed by the EPA in January, 1994. RMT/JN provided the EPA with a H&S Plan for the remedial investigation activities conducted in May, 1994. Several modifications will be made to RMT/JN's H&S Plan as documented in the revised H&S Plan (under separate cover).

The health and safety hazards associated with the proposed sampling include lead present in dust and soil as well as dilapidated conditions of some building units. All workers and oversight personnel entering the building units will require 40 hour health and safety training for hazardous waste site operations and medical surveillance monitoring. In addition, it is recommended that all workers and oversight personnel determine blood lead and zinc protoporphyrin levels prior to and following the sampling. All workers and oversight personnel will be required to wear hard hats, safety glasses, and level D personal protective equipment (PPE) during activities within the work zone.

Ambient air quality will be determined by an aerosol monitor (Miniram MIE PDM3) and personal air monitor with filter cassette (SKC filter unit Model 225-03-02). One personal air monitor will be given to each team for at least two days of the sampling. The filter cassettes will be shipped to an American Industrial Hygiene Association (AIHA) Laboratory (TRI in Austin, Texas) for rush analysis. If the total lead content on the filter is below 50 ug/cubic meter on an eight-hour time-weighted basis, no further particulate sampling will be conducted

during the investigation. [NOTE: In order for laboratory to determine lead content of air in ug/cubic meter, the flow rate of the personal air monitor must be periodically recorded.] If high aerosol monitor readings (greater than or equal to 2.8 mg of total dust/cubic meter) or personal air monitor levels are high, an upgrade in PPE to level C will be required as detailed in the modified H&S Plan. The level C PPE requires the use of particulate filter masks (half or full face respirators).

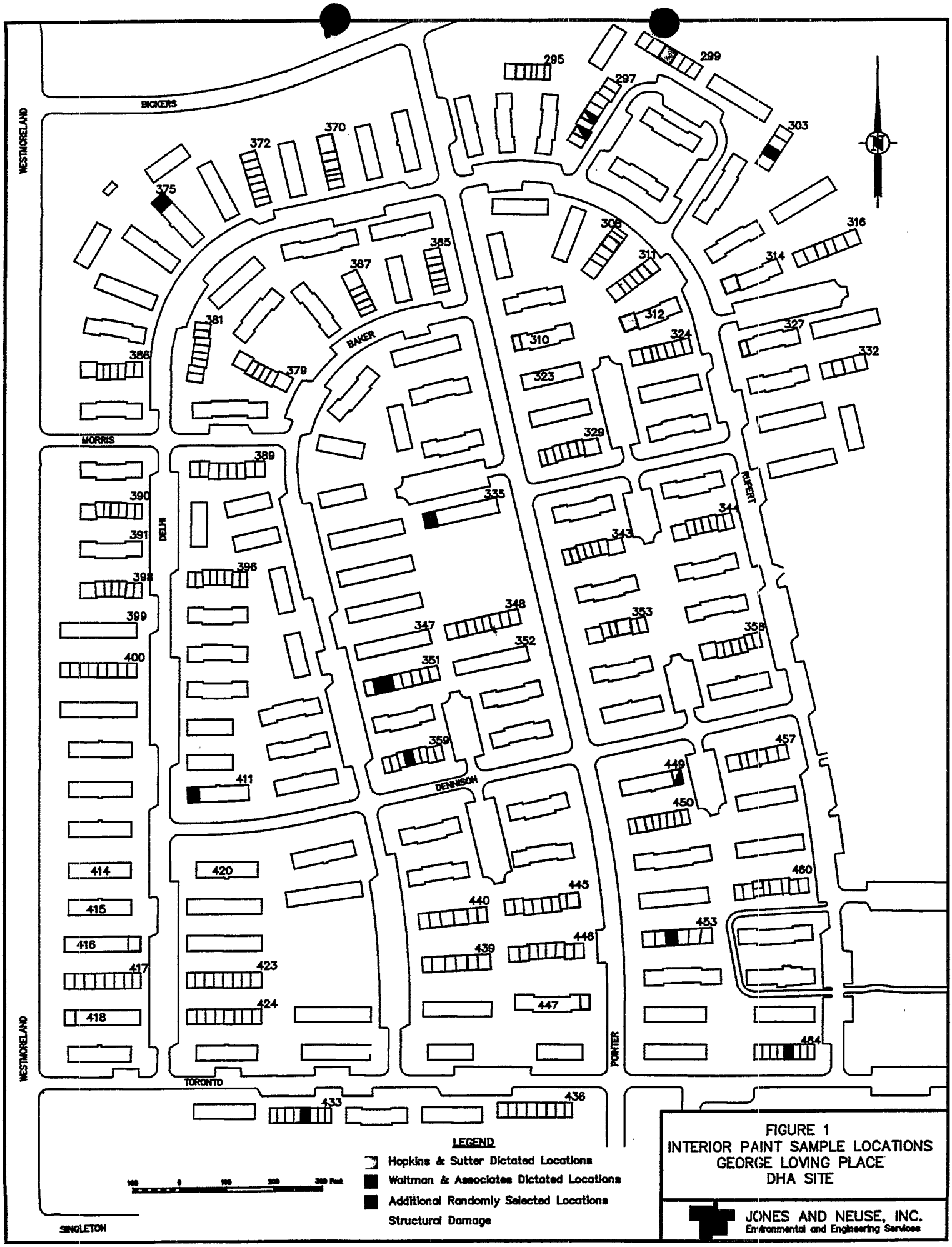
Analytical Procedures

All paint samples collected during the investigation will be analyzed for total lead. Analysis will be by the inductively coupled plasma (ICP) method (EPA Method 6010). Level III procedures will be utilized for the analysis, which are consistent with the current Superfund activities occurring at the DHA site. Analysis will be at the standard turn-around time of 10 working days. Results of the paint sampling will be provided in both hard copy and disk forms (two copies of each).

TABLE 1
INTERIOR PAINT SAMPLE LOCATIONS
DHA SITE

Hopkins & Sutter Locations			Hopkins & Sutter Locations			Waltman & Associates Locations			Random Locations		
Building Number	Building Type	Apartment Number	Building Number	Building Type	Apartment Number	Building Number	Building Type	Apartment Number	Building Number	Building Type	Apartment Number
418	F_2	3117	344	E_1	3363	297	G_2	3574	375	B	3611
417	F_2	3125	343	E_1	3368	297	G_2	3578	303	H	3520
416	F_1	3201	329	E_2	2927	449	B	2916	464	D	2907
400	F_2	3355	324	D	3425	351	F_1	3330	453	J_3	3140
398	E_1	3433	312	E_2	3483	351	F_1	3332	411	B	3125
390	E_1	3465	310	E_1	3502				433	D	3126
386	E_1	3509	311	K	3497				359	E_2	3029
370	L	3685	308	L	3505				335	F_1	3421
370	L	3679	365	C_2	3549						
295	C_1	3548	367	C_1	3561						
299	J_2	3548	379	E_2	3509						
297	G_2	3574	379	E_2	3511						
297	G_2	3578	381	E_2	3514						
314	E_1	3436	389	G_2	3106						
316	J_2	3458	389	G_2	3110						
327	E_1	3428	396	E_1	3422						
332	H	3394	423	F_1	3130						
460	G_3	3157	424	F_2	3110						
450	D	3230	447	G_3	3101						
449	B	2916	436	F_1	3006						
457	B	2906	446	G_3	3133						
457	B	2910	439	J_3	3118						
358	E_1	3303	445	G_1	3201						
358	E_1	3307	440	J_1	3208						
353	E_1	3326	351	F_1	3322						
353	E_1	3328	348	F_2	3351						

Damaged units, access limited to first floor only



LEGEND

- Hopkins & Sutter Dictated Locations
- Waltman & Associates Dictated Locations
- Additional Randomly Selected Locations
- Structural Damage

FIGURE 1
INTERIOR PAINT SAMPLE LOCATIONS
GEORGE LOVING PLACE
DHA SITE

JONES AND NEUSE, INC.
Environmental and Engineering Services

025888

APPENDIX A

PROJECT LOG

Date	DHA George Loving Place	Temperature	Weather

CREW

TIME	DESCRIPTION

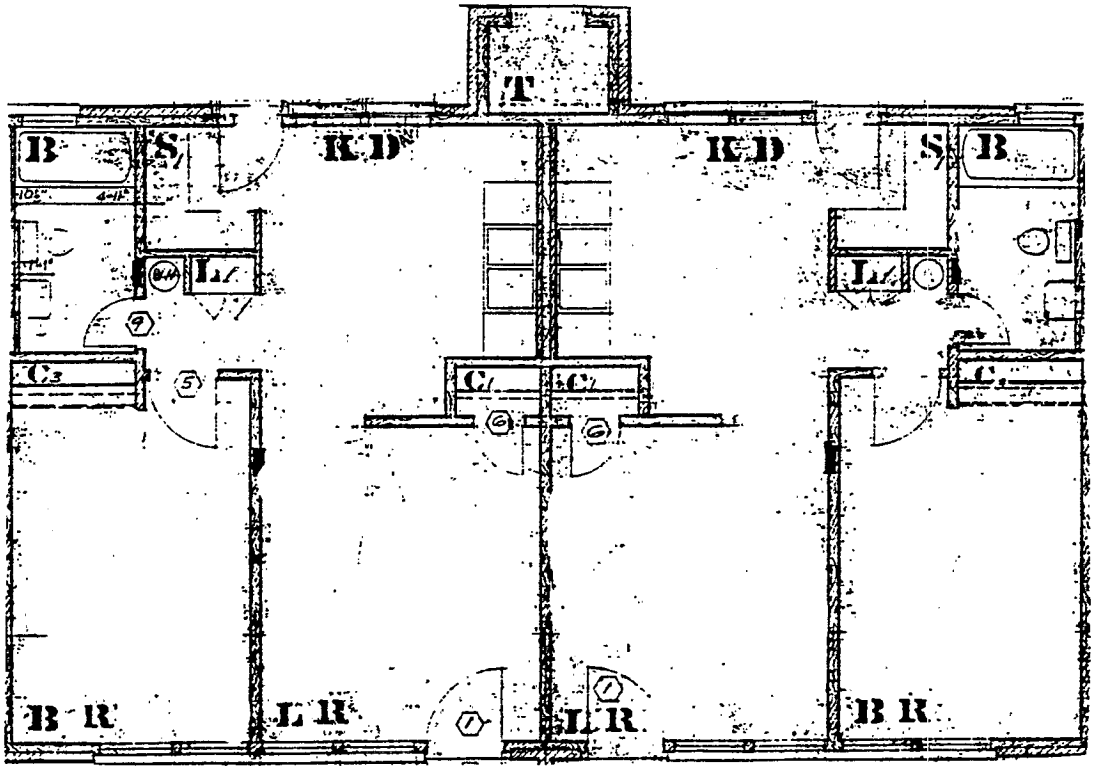
PROJECT LOG, PAGE ____

TIME	DESCRIPTION

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type B	One Story / Two Story
Address		No of Bedrooms One	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



Building/Apartment Condition

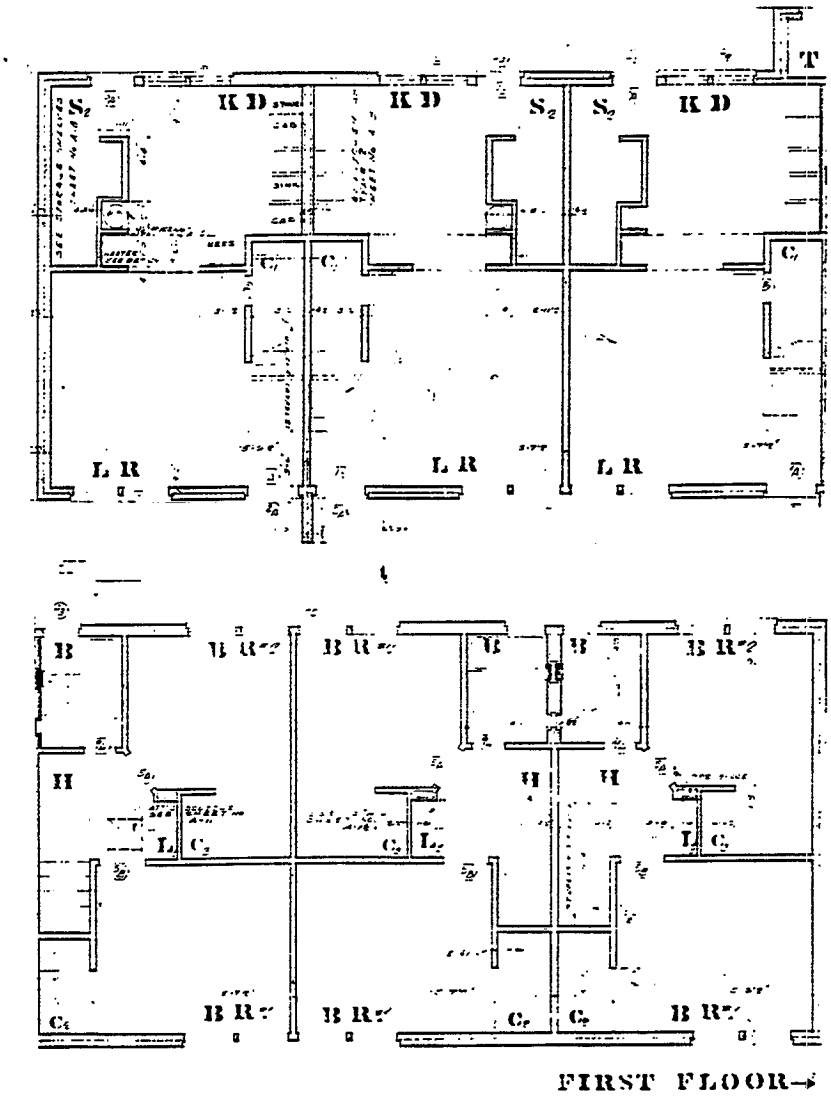
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025892

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type C	One Story (Two Story)
Address		No of Bedrooms Two	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



Building/Apartment Condition

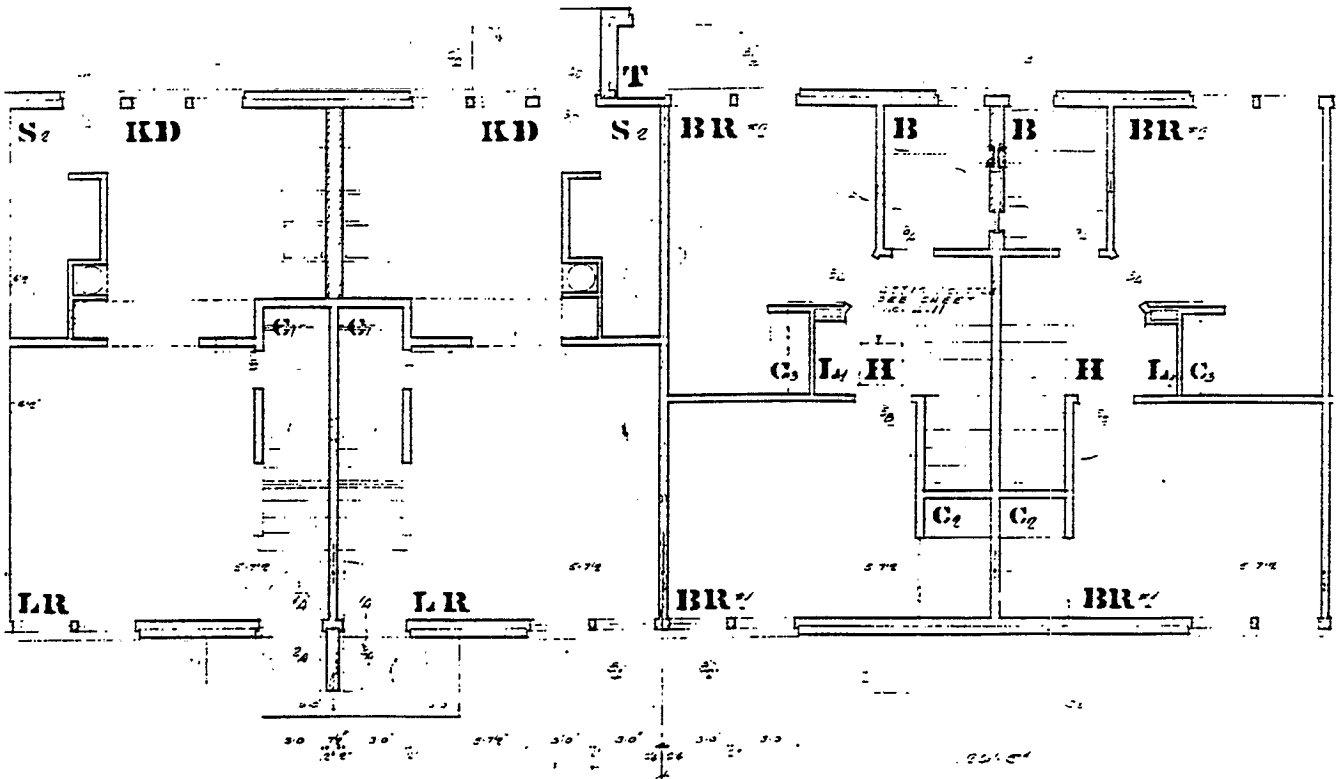
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025893

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type D	One Story (Two Story)
Address		No of Bedrooms Two	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



FIRST FLOOR — SECOND FLOOR

Building/Apartment Condition	

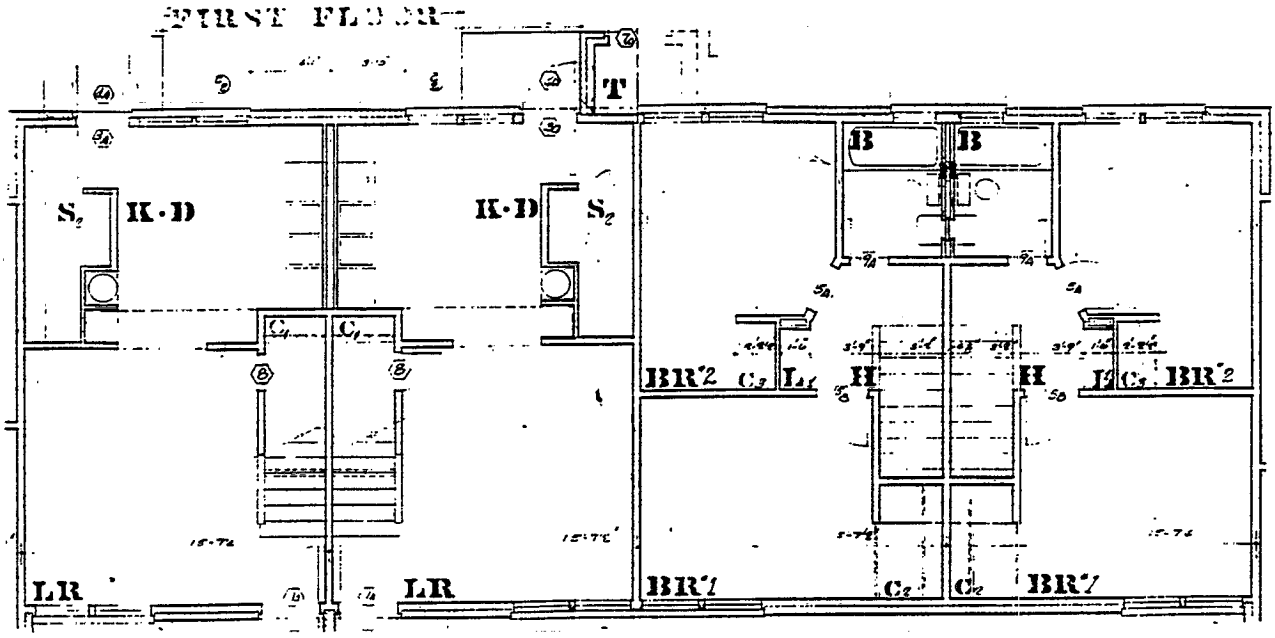
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025894

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type E1	One Story (Two Story)
Address		No of Bedrooms Two	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



Building/Apartment Condition

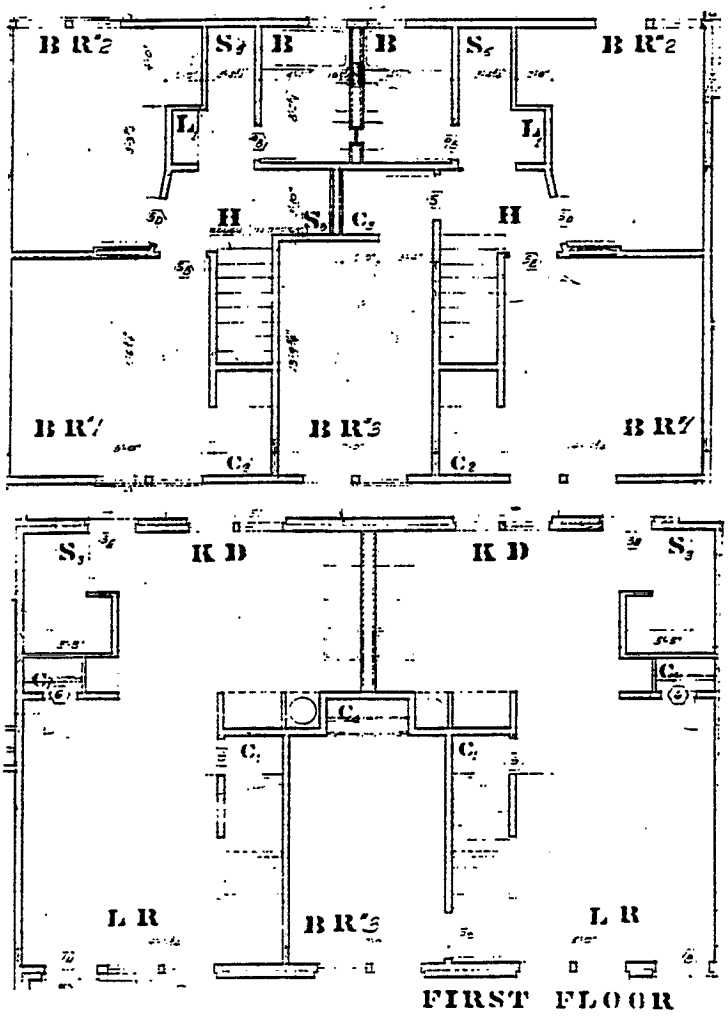
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025895

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type G or F	One Story (Two Story)
Address		No of Bedrooms Three	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



Building/Apartment Condition	

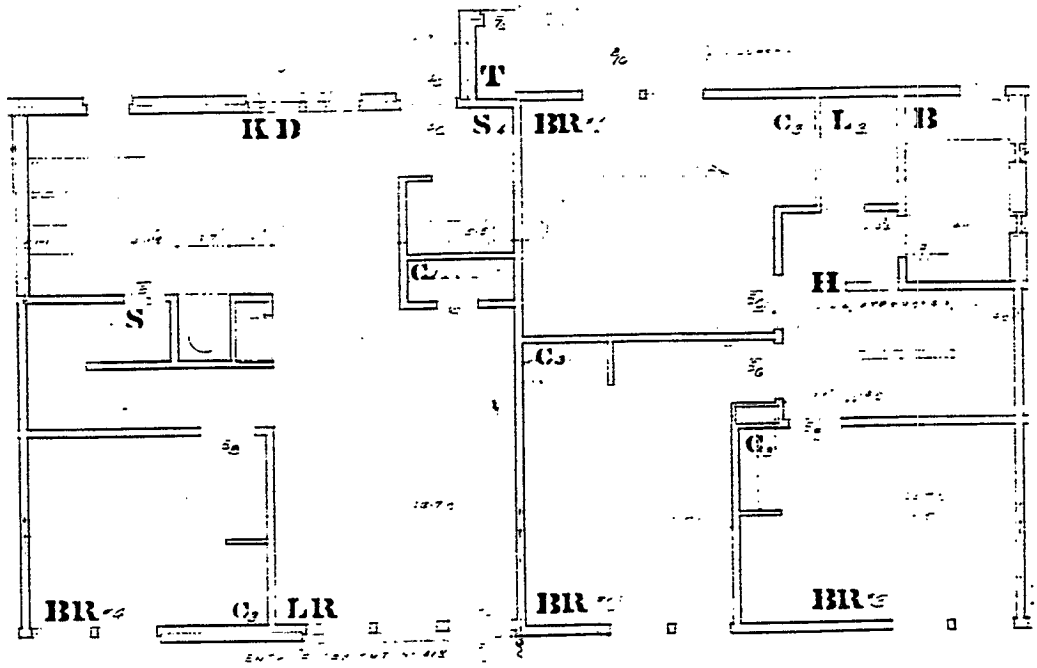
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025896

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type H	One Story (Two Story)
Address		No of Bedrooms Four	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



SECOND FLOOR

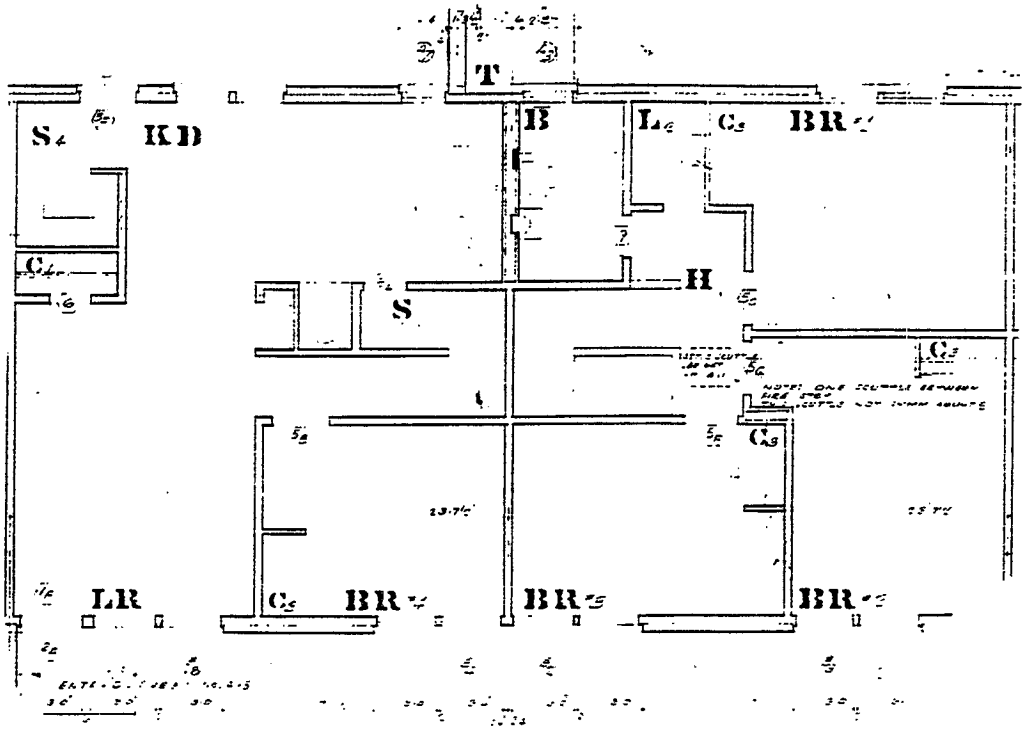
Building/Apartment Condition			
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025897

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type J	One Story (Two Story)
Address		No of Bedrooms Four	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



FIRST FLOOR — SECOND FLOOR

Building/Apartment Condition

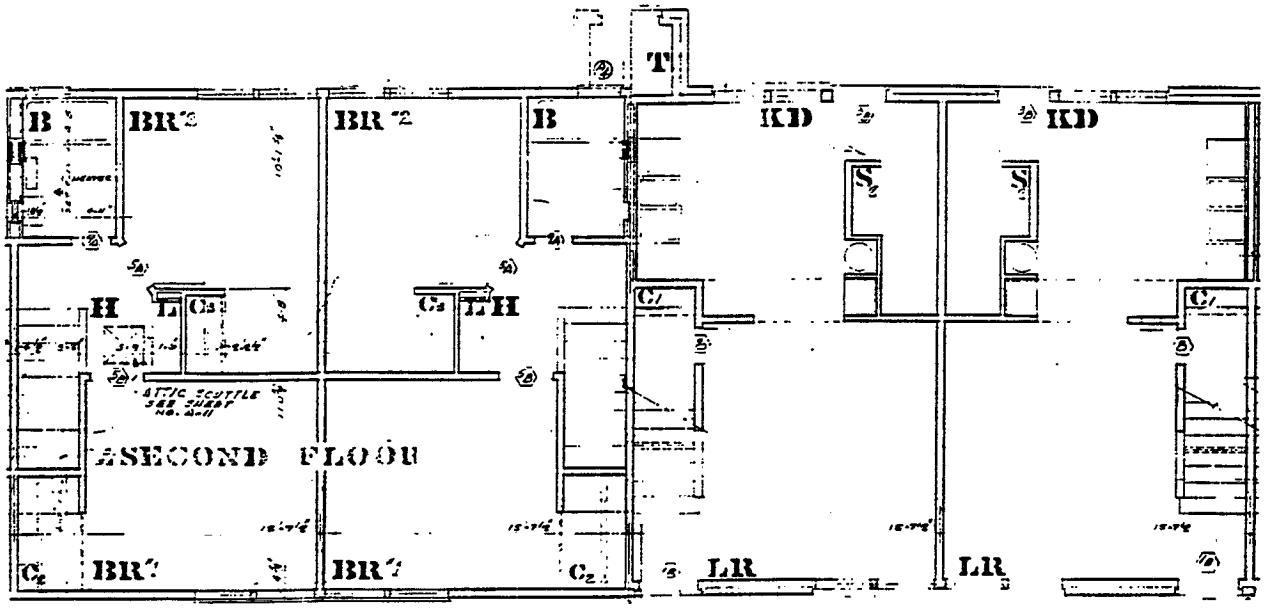
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025898

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type K or L	One Story Two Story
Address		No of Bedrooms Two	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



Building/Apartment Condition	

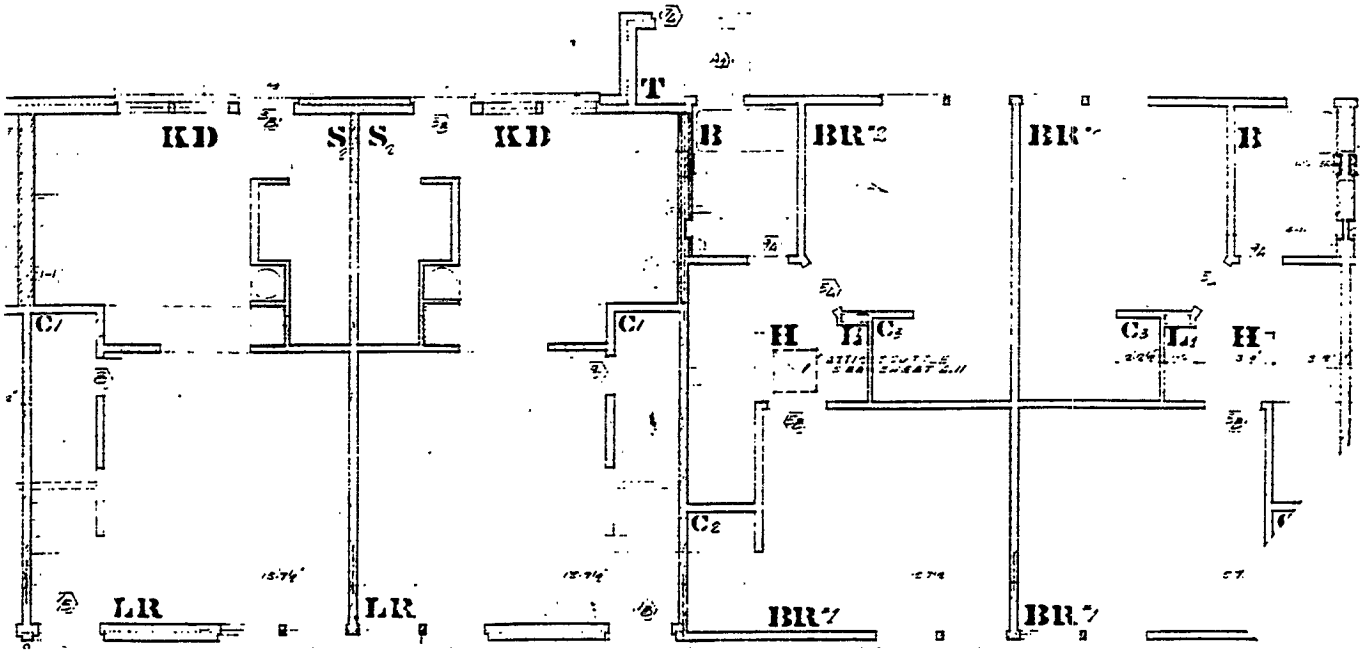
XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025899

LEAD BASED PAINT SAMPLE LOG

Job No. 673	Date	Building Type M	One Story Two Story Both
Address		No of Bedrooms	No of Windows
		No of Bathrooms One	No of Doors
Temperature	Weather	No of Samples	Time

PLAN



SECOND FLOOR

Building/Apartment Condition

XRF Person	Initial	On-Site Supervisor	Initial
Sample Person	Initial	Log Person	Initial

025900